

Serial No. 10/828,977
Amendment and Response to Office Action

Filed: April 21, 2004

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

LISTING OF CLAIMS:

1. – 4. (Canceled)

5. (New) A mobile terminal comprising:

a communication unit operable to enable communication over a first mobile communication network and a second mobile communication network; and

a control unit operable, when said mobile terminal is registered to said second mobile communication network, to determine if said mobile terminal is currently engaged in a voice communication over said second mobile communication network;

wherein said control unit is further operable to determine if said mobile terminal has changed location;

wherein said control unit, in response to a change in location of said mobile terminal, is further operable to determine if it is possible to register to said first mobile communication network, on the basis of a registration possibility indication receiveable from said second mobile communication network with said communication unit; and

wherein said control unit is further operable to attempt to register to said first mobile communication network only when said voice communication is not presently in progress, and when said registration possibility indication indicates that it is possible to register to said first mobile communication network.

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6. (New) The mobile terminal according to Claim 5, wherein said registration possibility indication receivable with said communication unit includes timing information indicative of a maximum number of times registration to said first mobile communication network is to be attempted, and said control unit is operable to attempt to register to said first mobile communication network on the basis of said timing information.

7. (New) The mobile terminal according to Claim 5, wherein said communication unit is operable to communicate voice communication or data communication, and said control unit is operable to attempt to register to said first mobile communication network for voice communication even when said communication unit is currently engaged in a data communication over said second mobile communication network.

8. (New) The mobile terminal according to Claim 5, wherein said registration possibility information is only an indication to initiate communication with said first mobile communication network.

9. (New) The mobile terminal according to Claim 5, wherein said mobile terminal is only registerable to said first mobile communication network when a user of said mobile terminal is an authorized user.

10. (New) The mobile terminal according to Claim 5, wherein said registration possibility information comprises a limitation of registration with the first mobile communication network for only one of voice communication or data communication.

11. (New) The mobile terminal according to Claim 5, wherein said first mobile communication network and said second mobile communication network are divided into a plurality of registration areas, and a changed location is a change from one registration area to another registration area.

12. (New) The mobile terminal according to Claim 5, wherein said changed location is a change from a current radio area to another radio area, both of which are included in one of said first mobile communication network or said second mobile communication network.

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13. (New) The mobile terminal according to Claim 5, wherein said changed location is a change from a current sector to a new sector within a radio area, wherein said radio area is included in at least one of said first mobile communication network or said second mobile communication network.

14. (New) A communication system comprising:

a first mobile communication network that includes a first location management device, wherein said first location management device is operable to manage location information of mobile terminals registered to said first mobile communication network;

a second mobile communication network that includes a second location management device and a base station, said second location management device operable to manage location information of mobile terminals registered to said second mobile communication network, and said base station positioned within said first mobile communication network, wherein said base station is operable to transmit for receipt by a mobile terminal registration possibility information indicating that it is possible to register to said first mobile communication network; and

a management device coupled with said first mobile communication network and said second mobile communication network, said management device operable to store location registration data correlated with a mobile terminal identifier for each of said mobile terminals, said management device operable to selectively update said location registration data in response to receipt from each of said mobile terminals of a notification of a current registration of a respective mobile terminal to at least one of said first mobile communication network or said second mobile communication network.

15. (New) The communication system of claim 14, wherein said management device is operable to store said location registration data correlated with a mobile terminal identifier in a management table.

16. (New) The communication system of claim 14, wherein said management device is operable, in response to a request related to a specified mobile terminal, to specify a mobile communication network to which said specified mobile terminal is registered based on said stored location registration data correlated with a mobile terminal identifier.

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17. (New) The communication system of claim 14, wherein said management device is operable to receive data from said first mobile communication network when said notification is from a mobile terminal registered with said first mobile communication network, and said management device is operable to receive data from said second mobile communication network when said notification is from a mobile terminal registered with said second mobile communication network.

18. (New) The communication system of claim 14, wherein an interval of time between transmission of said registration possibility information by said base station is adjustable in accordance with a distance of said base station from a center of said first mobile communication network.

19. (New) A location registration changing method comprising:
providing a mobile terminal operable to communicate over a first mobile communication network and a second mobile communication network;
registering said mobile terminal to said second mobile communication network;
determining in said mobile terminal if said mobile terminal is currently engaged in a voice communication over said second mobile communication network;
determining in said mobile terminal if said mobile terminal has changed location;
determining in said mobile terminal, in response to a determined change in location of said mobile terminal, whether it is possible to register to said first mobile communication network on the basis of registration possibility information received from said second mobile communication network;
transmitting from said mobile terminal to said first mobile communication network, a notification including an identifier only when voice communication is determined to not presently be in progress, and when it is determined that it is possible to register to said first mobile communication network; and
attempting to register said mobile terminal to said first mobile communication network.

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20. (New) The method of claim 19, further comprising receiving in a management device a notification transmitted by said mobile terminal through said first mobile communication network, and storing in said management device data indicating that said mobile terminal is registered to said first mobile communication network, said mobile terminal being specified by an identifier included in said notification.

21. (New) The method of Claim 19 wherein said notification information includes timing information indicative of a maximum number of times registration to said first mobile communication network can be attempted, and attempting to register said mobile terminal to said first mobile communication network comprises further step of attempting to register only said maximum number of times.

22. (New) The method of Claim 19, wherein said mobile terminal is operable to communicate voice communication or data communication, and attempting to register said mobile terminal to said first mobile communication network comprises attempting to register for voice communication; and engaging in a data communication over said second mobile communication network.

23. (New) The method of Claim 19, further comprising registering to said first mobile communication network only when a user of said mobile terminal is an authorized user.

24. (New) The method of Claim 19, wherein said notification information comprises a limitation of registration to said first mobile communication network to only one of voice communication or data communication.

25. (New) The method of Claim 19, wherein determining in said mobile terminal if said mobile terminal has changed location comprises determining if said mobile terminal has moved from one registration area to another registration area.

26. (New) The method of Claim 19, wherein determining in said mobile terminal if said mobile terminal has changed location comprises determining if said mobile terminal has moved from one radio area to another radio area.

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27. (New) The method of Claim 19, wherein determining in said mobile terminal if said mobile terminal has changed location comprises determining if said mobile terminal has moved from one sector to another sector within a radio area.